Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A medical capsule comprising:

a housing configured and dimensioned to be ingestible and/or implantable in an animal body, the housing having an interior space with a cargo bay area and an opening into the cargo bay area;

a payload device, within the cargo bay area, selected from the group consisting of medical diagnostic devices, devices for treating a medical condition and visualizing apparatus;

a transceiver enclosed within said housing;

at least one ultrasonic transducer electrically connected to the transceiver;

a power supply enclosed with the housing and electrically connected to the transceiver;

a microprocessor unit for data processing and control, said microprocessor being electrically connected to the transceiver; and

an interface for mechanically coupling the payload device to the cargo bay area and electrically coupling the payload device to the microprocessor so as to carry signals between the microprocessor and the payload device, the interface including a connector configured to provide a removable connection between the cargo bay area and the payload device so that the payload device cab be plugged into and removed from the cargo bay area.

Claim 2 (canceled)

Claim 3 (previously presented): The capsule of Claim 1, wherein the medical diagnostic devices include at least one microlaboratory device for analyzing body fluids for detecting and/or measuring blood, mineral, toxins and/or microorganisms.

Claim 4 (original): The capsule of Claim 3, wherein the microlaboratory device is a microfluidic device.

Claims 5 - 9 (canceled)

Claim 10 (original): The capsule of Claim 1, including an array of ultrasonic transducers to provide omni-directional coverage operable in the range of from about 5 MHz to about 20 MHz.

Claim 11 (original): The capsule of Claim 10, wherein at least six ultrasonic transducers are included in the array.

Claims 12 - 16 (canceled)

Claim 17 (previously presented): The system of Claim 29, wherein the means external to the body further comprises means for transmitting radio frequency electromagnetic signals and the system further comprises a remote monitoring station for receiving said radio frequency electromagnetic signals.

Claims 18 - 24 (canceled)

Claim 25 (previously presented): The capsule of Claim 1, wherein the connector includes conductive pins and/or sockets for providing the removable connection.

Claim 26 (previously presented): The capsule of Claim 1, further comprising multiple directional ultrasonic transducers, electrically connected to the transceiver, arranged to provide 2pi steradians of solid angle coverage about the capsule.

Claim 27 (previously presented): The capsule of Claim 26, wherein each of the transducers is configured and arranged to provide approximately a steradian or more of solid angle coverage over a different sector of the 2pi steradians of solid angle coverage.

Claim 28 (previously presented): The capsule of Claim 1, wherein the payload device, microprocessor unit, transceiver and at least one transducer cooperate to measure a physiological condition within the body, convert information about said physiological condition into a data stream, and transmit said data stream via a signal to a position outside the body.

Claim 29 (currently amended): A system for wireless communication with a transceiver within a living body, the system comprising:

a) at least two capsules each configured and dimensioned to be ingestible and/or implantable in an animal body, each capsule including:

a payload device selected from the group consisting of medical diagnostic devices, devices for treating a medical condition and visualizing apparatus;

a two-way ultrasonic transducer array;

a transceiver connected to the transducer array;

a power supply; and

a microprocessor,

wherein the at least two capsules are configured for networked communication with each other using ultrasonic signals,

wherein each of the networked capsules is identified by a unique identity (ID) address or a unique acoustic frequency, and

wherein the networked communication includes a two capsule handshake procedure wherein one of the capsules periodically initiates transmission and the other capsule responds directly by acknowledging receipt of the initiated transmission; and,

b) means positioned external to the body for transmitting and receiving ultrasonic signals to and from at least one of the at least two capsules.

Claim 30 (previously presented): The system of Claim 29, wherein the transducer array includes a two-way ultrasonic transducer array arranged to provide a 2pi steradians of solid angle coverage about the capsule.

Claim 31 (canceled)